Lake Hiawatha Lake Vegetation Index Results (8-9-2013)

The Lake Vegetation Index score for Lake Hiawatha was 86, placing the lake's vegetative community in the exceptional category.

The Lake Vegetation Index (LVI) is a multimetric index that evaluates how closely a lake's plant community resembles one that would be expected in a condition of minimal human disturbance. It is based on a rapid field assessment of aquatic and wetland plants as indicators of various effects of human disturbance over time. Plants respond to physical disturbances such as introduction of exotic species or lakeshore alterations, and chemical disturbance such as introduction of excess nutrients, particulates, or herbicides from the surrounding land uses.

The LVI method is performed from a boat, and involves dividing a lake into 12 units and identifying plants in 4 of the 12 units. Plants are identified in the selected unit by a visual boat "drive by" and also via a transect approach. The resulting data is used to calculate the LVI and is evaluated according to the scoring system in Table 1. County staff are available to discuss this information as desired.

TABLE 1. Category names, ranges of values for LVI, and example descriptions of biological conditions typically found for that category.

| Aquatic life use category | LVI Range | Description |
|---------------------------|--------------|---|
| Exceptional | 78–100 | Nearly every plant present is a species native to Florida, invasive taxa typically not found. About 30% of taxa present are identified as sensitive to disturbance. |
| Healthy | 43–77 | About 85% of plant taxa are native to Florida; invasive taxa present. Sensitive taxa have declined to about 15%. |
| Impaired | 0–42 | About 70% of plant taxa are native to Florida. Invasive taxa may represent up to 33% of total taxa. Less that 10% of the taxa are sensitive. |

Twenty-five species were found during the survey. The native species maidencane (*Panicum hemitomon*) was the most dominant species in the lake. Other native shoreline vegetation included; red maple (*Acer rubrum*), buttonbush (*Cephalanthus occidentalis*) and myrtle dahoon (*Ilex myrtifolia*).

Torpedo grass (*Panicum repens*), listed as a Category I Invasive Exotic species by the Florida Exotic Pest Plant Council, was also found in the lake.

For a complete list of plants found during the LVI survey, please see Table 2.

TABLE 2. Scientific and common names of the plants identified during the Lake Hiawatha LVI

survey (8-9-13).

| Scientific Name | Common Name |
|------------------------------|------------------------------|
| Acer rubrum | red maple |
| Andropogon virginicus | broomsedge bluestem |
| Cephalanthus occidentalis | buttonbush |
| Cyrilla racemiflora | swamp titi |
| Eupatorium sp. | Eupatorium |
| Gelsemium sempervirens | evening trumpet flower |
| Ilex myrtifolia | myrtle dahoon |
| Lachnanthes caroliana | redroot |
| Lemna minor | common duckweed |
| Leucothoe racemosa | sweetbells |
| Liquidamber styraciflua | American sweetgum |
| Lycopus rubellus | taperleaf water horehound |
| Nyssa sylvatica var. biflora | swamp tupelo |
| Panicum hemitomon | maidencane |
| Panicum repens(I) | torpedo grass |
| Pinus taeda | loblolly pine |
| Polygonum hirsutum | hairy smartweed |
| Polygonum punctatum | dotted smartweed |
| Rhexia mariana | Maryland meadowbeauty |
| Rhynchospora inundata | narrowfruit horned beaksedge |
| Saccharum giganteum | sugarcane plumegrass |
| Salix carolina | coastal plain willow |
| Smilax rotundifolia | bullbrier |
| Taxodium ascendens | pond cypress |
| Vitis rotundifolia | muscadine |

I - Category I Invasive Exotics

For additional information about the LVI, please review the Florida Department of Environmental Protection's <u>LVI Primer</u> document.

For more detailed information about the above species, please visit the Atlas of Florida Vascular Plants website.

For additional information about Category I and II invasive exotic plants, please visit the Florida Exotic Pest Plant Council webpage.